

LISTING OF CLAIMS

1-45 Cancelled

46. (New) An integral venous access catheter shaft comprising:

a proximal tube segment of a first polymer material comprising less than 30% by weight radiopaque filler and having a first durometer value between about 87 and 100 Shore A and having a first burst strength of less than 300 psi;

a distal tube segment of a second polymer material comprising between about 30% and 50% by weight radiopaque filler and having a second durometer value between about 70 and 90 Shore A and having a burst strength that is less than the first burst strength, wherein the first durometer value is substantially higher than the second durometer value, and wherein the percentage by weight of said filler in said second polymer material is substantially greater than the percentage by weight of said filler in said first polymer material; and

a transition tube segment between said proximal and distal segments, said transition tube segment having a continuously varying mixture of said first and second polymer materials, wherein the ratio of said first polymer material to said second polymer material continuously decreases from a proximal end to a distal end of said transition tube segment, and wherein the percentage by weight of said filler continuously increases from the proximal end to the distal end of said transition segment,

wherein the respective proximal, distal, and transition tube segments are formed by a continuous extrusion process to provide an integral catheter tube without bonds or welds.

47. (New) The catheter shaft of claim 46 wherein said continuous decrease of polymer ratios and continuous increase of filler weight in said transition zone are substantially linear.

48. (New) The catheter shaft of claim 46 wherein the flexibility of the proximal segment is substantially equal to the flexibility at the proximal end of the transition segment and the flexibility of the distal segment is substantially equal to the flexibility of the distal end of the transition segment.

49. (New) The catheter shaft of claim 47 wherein the flexibility of the proximal segment is substantially equal to the flexibility at the proximal end of the transition segment and the flexibility of the distal segment is substantially equal to the flexibility of the distal end of the transition segment.